and Public Sector Industry, providing soft loans for encouraging commercialization of indigenous technologies, etc. to ensure that india's efforts to compete in the world markets in cutting edge areas in science and engineering are sustained consistent with the requirement of globalization and national priorities. The Government has mechanisms to assess the trends in global R&D excellence and will continue to strengthen such areas in National R&D and Educational Institutions to enable these to remain globally competitive.

Early warning system for Tsunami

3144. SHRIMATI SUSHMA SWARAJ: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether it is a fact that Government had made an announcement to indigenously build the early warning system for Tsunami;

(b) if so, the amount of money earmarked for this plan; and

(c) the progress made so far in developing this system?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) The Government is setting up on its own, an early Warning System for Tsunami and Storm Surges in Indian Ocean at the total cost of Rs. 125 crores with the following components:

- installation of tsunami warning sensors close to the ocean bottom at appropriate locales in the Indian Ocean, with real time connectivity;
- Tide guage and data buoys networking to validate arrival of tsunami waves at the coast;
- strengthening of the existing seismological network to indicate, near real time occurrence of tsunamigenic earthquakes;
- Modelling of the inundation scenarios for the entire coast and mapping of potential risk areas;
- collection of information, analysis and generating status advisories.

A centre would be set up at Indian National Centre for Ocean Information Services (INCOIS), Hyderabad, Andhra Pradesh on a 24x7 basis. The system is scheduled to be operational by September, 2007. The earmarked fund for the Tenth Plan is Rs.115 crores.

(c) An interim early warning mechanism is presently operational at INCOIS, Hyderabad on 24x7 basis. Under this project 11 tide guages have

already been installed and they have been connected through GSM for real time data transmission. These will be upgraded to satellite link. Two Coastal Radars have been installed off Chennai and thet are operating satisfactorily. The process of strengthening the seismic network involving 17 seismic stations for near real time detection of earthquakes has also been initiated. The procurement process of Bottom Pressure Recorders for detection of propagation of tsunami generated waves is in an advanced stage.

C.S.I.R. Laboratories

3145. SHRI SHARAD ANANTRAO JOSHI: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the total number of CSIR laboratories;

(b) the details of recurring and capital expenditure incurred and income earned by each laboratory during the last five years;

(c) the sponsorship fees earned from the projects sponsored by Government agencies and private agencies;

(d) the income generated by each laboratory by giving technical services to Government and private agencies; and

(e) the expenditure incurred by tax payers on each laboratory, during last five years to sustain the establishment?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) At present CSIR has 38 constituent National Labs./Instts. in addition to CSIR Hqrs. and CSIR Complex, Chennai.

(b) The details of revenue and capital expenditure incurred by each Lab. during the last five years are placed at Annexure. [*See* Appendix 207, Annexure No. 12] The detail of income earned during the period is placed at Annexure. [*See* Appendix 207, Annexure No. 12] The information includes expenditure against Government grant and internal resources of CSIR. It is mentioned that the grant-in-aid to CSIR is part of Revenue Budget of the Government of India.

(c) The information is placed at Annexure. [*See* Appendix 207, Annexure No. 12]

(d) The information is placed at Annexure. [*See* Appendix 207, Annexure No. 12] (It includes the figures of other Technical Services only)

(e) The information is placed at Annexure. [*See* Appendix 207, Annexure No. 12]